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LETTER TRANSMITTING U S EPA REGION III'S COMMENT ON REMEDIAL INVESTIGATION WORK PLAN FOR SITE 8 NAB LITTLE CREEK VA
10/17/2001
U S EPA REGION III

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103

17 October 2001

Commander, Atlantic Division
Naval Facilities Engineering Command
Environmental Quality Division, Code: 1823
1510 Gilbert Street
Norfolk, Virginia 23511-2699
Attn.: Ms. Dawn Hayes

Re: *Remedial Investigation Work Plan for Site 8, Demolition Debris Landfill*
Naval Amphibious Base Little Creek, Virginia Beach, VA
July 2001

Dear Ms. Hayes:

The above referenced document has been reviewed by the Environmental Protection Agency. The comments are separated into two sections: Ecological Concerns and Toxicological Concerns.

Ecological Concerns

Comments 1 through 7 are considered to be critical comments as they may have a direct impact on the investigation and the usability of the resultant data. It is recommended that the work plan be revised to these comments. The remaining comments are provided on areas of the plan where the information presented is either unclear or does not adequately support the conclusions being made. These comments should either be addressed via revisions to the work plan or within a response to comments letter.

1. In relationship to previous investigations, Section 3.2.1 (Surface Soil Analytical Results) indicates ten surface soil samples were collected from eight locations. According to Figure 3-1 (Soil Sampling Locations from 1999 SI), these eight locations are not associated with known debris piles. The value of this data to evaluate the relationship between the debris piles and the resultant contaminant levels is uncertain. Unless the data is demonstrated to be indicative of contaminant levels associated with the debris piles, its use is likely to underestimate risk to ecological receptors.

2. In Section 3.2.1, on page 3-7, there is reference to what appear to be two "background" soil data sets (eastern US and average Virginia). Considering the fact that 90 percent of this federal facility is either dredge spoils or imported fill material (see Section 2.5 on page 2-6), site specific background data should be utilized rather than these state or regional values. If site-specific background data is not available and will not be

collected, the high level of uncertainty in using regional background values should be discussed.

3. Previous discussions indicated that the landfill extends to the bank of the creek in the vicinity of debris pile 19 and that any remedial action in this area would likely undermine the integrity of the existing bank. While this might be true, this decision should be made after (not before) the ecological risk assessment is complete. It should be noted that bioengineering techniques are sufficiently advanced to address this concern as part of any necessary remedial activity. The ecological risk presented by each debris pile should be assessed before decisions about the need for remediation are finalized.

4. Section 4.1 (Soil Cover Grid Survey) and Section 4.2 (Field Data Acquisition) on page 4-1 identify a 50-foot by 50-foot grid that is to generate approximately 150 sample locations. The adequacy of this grid to determine waste elevation is uncertain. For example, of the identified 22 debris piles, eight are outside this grid and only two of the remaining debris piles within the grid fall on a node. Also, according to Figure 4-2, there are only 73 grid nodes. The discrepancy between 73 grid nodes and 150 sample locations needs to be clearly discussed. This sampling plan appears to attempt to minimize the detection of contaminants that may pose risk and as a result would likely underestimate risk to ecological receptors.

5. Section 4.4 (trenching) on page 4-4 identifies four test trenches that will be used to assess the depth and volume of subsurface debris. None of these trenches are located in or into any known debris piles. The rationale for the number and placement of the trenches should be clearly presented in this section.

6. Section 4.5 should clearly present the rationale for locating the proposed eight soil samples as depicted on Figure 4-4. The reasons for selecting these locations are not obvious. Based on previous samples and known chemicals, it may be helpful to locate samples both in and adjacent to the debris piles that potentially represent the most risk to ecological receptors. In particular, debris piles 9, 12, 13, 14, and 19 (Figures 2-1 and 3-4) may require multiple sample locations because of their size and configuration and potential for causing risk to ecological receptors. Another concern about the proposed eight soil samples is whether or not they will adequately characterize ecological risk at Site 8. From the information presented in this RI work plan, potential risk to ecological receptors from soil could come from surface debris and chemicals within the landfill.

7. Section 4.7 (Surface Water and Sediment Sampling) on page 4-10 indicates that the surface water and sediment sample locations may be modified in the field if seeps are encountered to allow sampling of these seeps. This section should clearly indicate that these modifications could include adding samples as well as moving sample locations. This section should also indicate how these modifications would be made (i.e. what decision criteria will be used).

8. In Section 2.3 (Site History) on page 2-3, the statements are made that there is no evidence of past hazardous waste disposal at the site and that no waste inventory was available. There appears to be an inconsistency between these statements. If no waste inventory is available, then it is uncertain how the statement about no evidence of past hazardous waste disposal at the site can be supported.

9. Table 3-1 (Analytical Results for Constituents Detected in the Surface Soil from 1999 SI) lists a column of screening values. These screening values appear to be human health related. Ecological screening values should also be included in this table. This comment also applies to other tables in this document.

10. In Section 3.2.1, on page 3-7, the phrase, "...compounds exceeding screening values..." appears. From this phrase it is not clear if these screening values include both human health and ecological values. This needs to be clearly stated both in this section and other places in this document.

11. Figure 3-4 (Sample locations from 1999 SI and Debris Piles Identified in 2000 EE/CA) identifies debris pile 19 by a yellow box but not the legend symbol. This should be corrected. Also, debris pile 19 does not appear on Figure 2-1 (Debris Landfill Map) and should be added.

12. Table 3-5 (Maximum and Average Metals Concentrations in the Eastern U.S. and Virginia Soils) should also contain maximum and average "background" concentrations from NAB Little Creek.

13. In Section 3.4 (Engineering Evaluation and Cost Analysis) on page 3-29 the statement is made that each debris material was multiplied by a factor of 1.2 for estimating purposes. Support for the factor of 1.2 should be included.

14. Section 3.4, on page 3-29, also identifies three removal alternatives, but does not indicate which alternative was selected, if any. The selected alternative should be identified.

15. Section 3.5 on page 3-30 indicates that an ERA will be completed based on the information gathered during the RI. This statement should more clearly identify the ERA as a screening level effort that may lead to development of a baseline ERA.

16. Section 4.3 (Wetland Delineation) on page 4-1 identifies the types of wetlands associated with Site 8. A figure identifying these wetlands in relationship to both the debris piles and proposed sampling locations should be included in this RI work plan.

17. Section 4.5 (Soil Sampling) on page 4-4 identifies eight soil sampling locations from which soils at three depths (0-6 inches, 6-12 inches, and 12-24 inches) will be collected. Figure 4-4 shows the locations of these samples. From this figure, some of the sample locations appear to be in wetland sediments (particularly samples SS/SB 206, 207, and 208). The location of these samples in soils or sediments should be clearly identified, as this will dictate which screening criteria will be used to evaluate the chemical concentrations found in these samples.

18. Section 4.5 on page 4-4 indicates that the surface and subsurface soil samples will be collected after debris removal is complete. This statement should clearly indicate this sampling activity will occur after the removal of the surface debris and that minimal disturbance of surface and subsurface soils will be associated with this removal. Also, placement of surface soil and subsurface soil samples in relationship to these disturbed areas may become important in selection of final sampling locations. This issue should be clearly addressed in relationship to maximizing the ability to demonstrate risk to ecological receptors.

19. Section 4.5 on page 4-4 indicates that the sample locations depicted on Figure 4-4 may change based on field observations. The reasons for potentially altering these locations in the field should be clearly identified in the RI work plan.

20. According to Section 4.7, VOCs are not included in the list of analytes. The reason(s) for this omission should be clearly stated.

Toxicological Concerns

1. Table 3-1: Check the units for pesticide/PCB analysis. They appear to be inconsistent.

2. Section 3.2.5 Background Study: The report compares on site data from the SI to background data in a national database. It is preferable to use site specific background data to generic national concentrations because of the large variation in element concentration due to local conditions. There is site specific soil data available for Little Creek. I recommend that it be used for background comparison purposes.

3. Table 3-6: The concentration of manganese for total metals from the 2000 background investigation is listed as 0.33, it should be 1500.

If you have any questions concerning any of these comments, please call me (215) 814-5129.

Sincerely,

Mary Cooke

Mary T. Cooke
Remedial Project Manager

cc: Randy Sawyer, WNSTN
Robert Weld, VDEQ
Matt Louth, CH2M HILL